

**ABSTRACT OF THE DISCLOSURE**

A packet transmission apparatus transfers arriving packets directly to a highest-priority queue under non-congestion conditions, and classifies the priority of a packet only on the existence of congestion. In one embodiment, non-congestion is determined when all queues are empty. In another embodiment, congestion or non-congestion is determined by upper and lower thresholds on the total number of packets in all queues. The ability to omit classifying incoming packets in the non-congestion condition improves processing speed, and eliminates the need for re-queuing or packet-replacing operations.